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Si-Ge-E ANALOGS

(57) Abstract: A process for is provided for synthesizing a compound having the formula  $\text{E}(\text{GeH}_3)_3$  wherein E is selected from  
the group consisting of arsenic (As), antimony (Sb) and phosphorus (P).  $\text{GeH}_3\text{Br}$  and  $[\text{CH}_3]_3\text{Si}_3\text{E}$  are combined under conditions  
whereby  $\text{E}(\text{GeH}_3)_3$  is obtained. The  $\text{E}(\text{GeH}_3)_3$  is purified by trap-to-trap fractionation. Yields from about 70% to about 76% can be  
obtained. The  $\text{E}(\text{GeH}_3)_3$  can be used as a gaseous precursor for doping a region of a semiconductor material comprising Ge, SnGe,  
SiGe and SiGeSn in a chemical vapor deposition reaction chamber.

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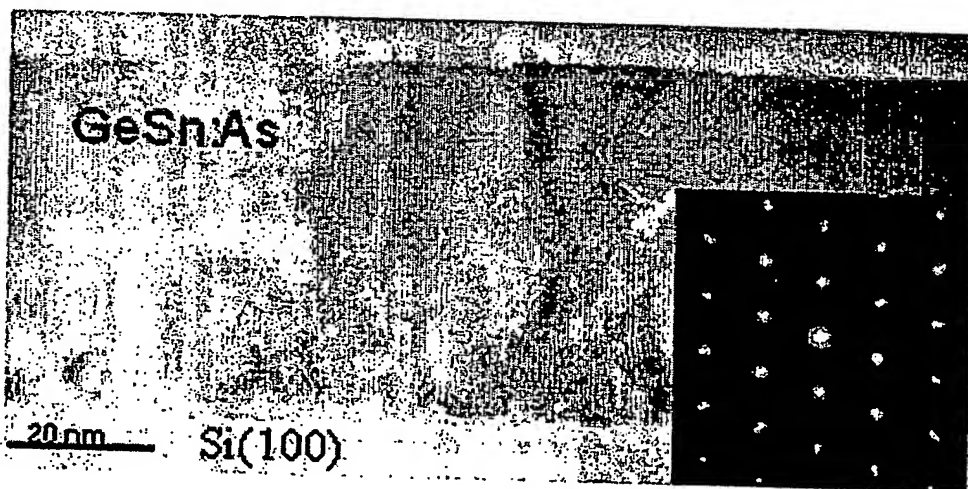
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- (74) Agent: **ONEY, Richard, E.; Fennemore Craig**, Suite 2600, 3003 North Central, Phoenix, AZ 85012-2913 (US).
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[Continued on next page]

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